regard, the Amendments filed June 13 and July 6, 2001 were entered in which claims 8, 17 and 19 were cancelled, and claim 72 added.[1] Clarification is respectfully requested.

Claims 1, 5, 8-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Akihiko et al. (EP 0 553 821 A1, dated 4-8-93), Zapata et al. (J. Biol. Chem. Vol. 264(25):14769-14774) and the knowledge that CMP-NeuAc can be synthesized from CTP and NeuAc (Stryker, Biochemistry, 3rd Ed, 1988).

Akihiko et al. discloses a process for producing CTP-choline by converting UTP or CTP using microorganism A2 and microorganism B, but neither discloses nor suggests any production process concerning GDP-sugar and UDP-sugar as recited in the pending claims.

Zapta et al. discloses a process for producing CMP-silalic acid using, as an enzyme source, a recombinant *Escherichia coli* containing a gene encoding a sialic acid synthase, but neither discloses nor suggests the production process of GDP-sugar and UDP-sugar which are sugar nucleotides other than CMP-sialic acid.

Moreover, there is no suggestion in any of the cited art that a sugar nucleotide can be produced by combining the techniques in Akihiko et al. and Zapta et al.

The Examiner also provisionally rejected claims 1, 5, 8 and 15-20 under the judicially created doctrine of obviousness-type double patenting over claims 72-80 of copending application No. 09/907,574. In response, enclosed is a Terminal Disclaimer

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1/ It is clear that such was intended, for instance, at least by the text of the amended claims presented in the September 13, 2001 preliminary amendment. If, however, for whatever reason, those papers were not entered, entry thereof is now respectfully requested. Any fees may be charged to Deposit Account No. 06-1205.

together with a check in the amount of $110.00 to cover the fee for submitting such document.

In view of the above amendments and remarks, Applicants submit that all of the Examiner's concerns are now overcome and the claims are now in allowable condition. Accordingly, reconsideration and allowance of this application is earnestly solicited.

Claims 1, 5, 15, 16, 18, 20 and 72 remain presented for continued prosecution.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Twice Amended) A process for producing a sugar nucleotide, which comprises:

selecting, as enzyme sources, a) a culture broth of a microorganism capable of producing quanosine-5'-triphosphate ("UTP") [nucleoside-5'-triphosphate ("NTP")] from a nucleotide precursor, or a treated product of the culture broth selected from the group consisting of a concentrated product of the culture broth, a dried product of the culture broth, a culture supernatant obtained by centrifiguring the culture broth, a concentrated product of the culture supernatant, an enzyme preparation obtained from culture supernatant, cells obtained by centrifuging the culture broth, a dried product of the cells, a freeze-dried product of the cells, a surfactant-treated product of the cells, a solvent-treated product of the cells, a protein fraction of the cells, an immobilized product of the cells and an enzyme preparation obtained by extraction from the cells, and b) a culture broth or culture broths of at least one strain of microorganism having genes responsible for production of quanosine diphospho-sugar ("GDP-sugar") or uridine diphospho-sugar ("UDP-sugar") [a sugar nucleotide] from a sugar selected from the group consisting of glucose, fructose, galactose, glucosamine, N–acetylglucosamine, N-acetylgalactosamine, mannose, fucose[,] N– acetylmannosamine [and N-acetylneuraminic acid], or a treated product of the culture broth selected from the group consisting of a concentrated product of the culture broth, a dried product of the culture broth, a culture supernatant obtained by

centrifuging the culture broth, a concentrated product of the culture supernatant, an enzyme preparation obtained from culture supernatant, cells obtained by centrifuging the culture broth, a dried product of the cells, a freeze-dried product of the cells, a surfactant-treated product of the cells, a solvent-treated product of the cells, a protein fraction of the cells, an immobilized product of the cells and an enzyme preparation obtained by extraction from the cells;

allowing the enzyme sources, the nucleotide precursor and the sugar to be present in an aqueous medium to form and accumulate GDP-sugar or UDP-sugar [the sugar nucleotide] in the aqueous medium; and

recovering GDP-sugar or UDP-sugar [the sugar nucleotide] from the aqueous medium.